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10/728,496	12/05/2003	Punam K. Saha	P-2944	9711

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EXAMINER	
KRASNIC, BERNARD	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/728,496	SAHA ET AL.	
	Examiner	Art Unit	
	BERNARD KRASNIC	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 April 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28 and 31-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7,10,11,13,16-28 and 31-34* is/are rejected.

7)☒ Claim(s) *6,8,9,12,14 and 15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *4/28/2009* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. The amendment filed 4/28/2009 have been entered and made of record.

2. The Applicant has included newly added claim(s) 31-34.

3. The application has pending claim(s) 1-28 and 31-34.

4. The Applicant alleges, “Section 102(a) states that ..." in page 13 through "Moreover, as further noted in the Wehrli Declaration ..." in page 14, and states respectively that the Applicant’s invention precedes May 2002 as is clearly set forth in the Wehrli Declaration, which the Examiner expressly indicated was accepted into the present record and which was the basis for the withdrawal of the rejection over Takahashi. The Examiner disagrees because the Examiner never indicated that the declaration established Applicants' date of invention prior to May 2002 but rather clearly stated that the declaration was accepted because “the inventors have stated that Dr. Takahashi was a named author only because his data was used to test and confirm the effect of using the presently claimed method and that Dr. Takahashi was not part of Applicants’ present invention and offered no contribution to its conception” as is seen in the Examiner’s Non-Final Office Action dated 1/29/2009 in page 2 section 4.

Further, the Applicant has stated in page 14 of the current remarks section that “However, should yet another Declaration be required by the Examiner to expressly

establish Applicants' date of invention prior to August 2002, Applicant will certainly comply and can provide such a Declaration upon request". The Examiner strongly recommends the Applicant to file such a Declaration [in the Declaration please provide sufficient evidence that discusses the establishment of conception, reduction to practice of the invention, constructive reduction to practice, or due diligence with signatures from all named inventors of the subject matter claimed– see MPEP 715.04].

5. In response to the amendments filed on 4/28/2009:

The "Objections to the drawings" have been entered because of new Fig. 19 flowchart and therefore the Examiner withdraws the objections to the drawings.

The "Claim rejections under 35 U.S.C. 112, first paragraph" have been entered and therefore the Examiner withdraws the rejections under 35 U.S.C. 112, first paragraph.

The "Claim rejections under 35 U.S.C. 101" have been entered and therefore the Examiner withdraws the rejections under 35 U.S.C. 101. *Further, the Examiner believes it is inherent that such a computation of the fuzzy distance transform (FDT) is tied to a type of computer processor*.

6. The Applicant's arguments with respect to claims 1-28 and 31-34 have been considered but are moot in view of the new ground(s) of rejection because the Applicant has amended independent claim(s) 1 and 17.

7. Applicant's arguments filed 4/28/2009 have been fully considered but they are not persuasive.

The Applicant alleges, "Responses to the Rejection under 35 U.S.C. 102(a) ..." in pages 13-17, and states respectively that Borgefors reference is not a proper prior art reference in that it was published after Applicants' date of invention, and also it fails to teach Applicants invention. Firstly as has been discussed above, the Examiner never indicated that the declaration established Applicants' date of invention prior to May 2002 but rather clearly stated that the declaration was accepted because "the inventors have stated that Dr. Takahashi was a named author only because his data was used to test and confirm the effect of using the presently claimed method and that Dr. Takahashi was not part of Applicants' present invention and offered no contribution to its conception" as is seen in the Examiner's Non-Final Office Action dated 1/29/2009 in page 2 section 4. Secondly, in response to Applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., fuzziness during iterative propagation, a linear (binary images) or raster scan approach is inappropriate) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The Examiner still maintains that Borgefors teaches the broadest most reasonable claim language interpretation because Borgefors does provide [e.g.] a volumetric region / 2D or higher dimensions such as 3D of an object from an image (see Borgefors, right column of page 181 at paragraph "As mentioned in the Introduction ...",

easily extendible to higher dimensions such as 3D which is related to volumetric regions), performs a fuzzy distance transform / fuzzy border distance transform, and thereafter creates a revised image / skeletonized image (see abstract, Section 2 – Fuzzy border distance transforms, Figs. 2 and 3 show obtaining the initial targeted object and then initializing the fuzzy border distance transform and then the resulting skeletonized image produced from the computed fuzzy border distance transform). Therefore the rejection is maintained.

The Applicant alleges, “Response to the Rejection under 35. U.S.C. 103(a) ..." in pages 17-18, and states respectively that Borgefors and Wang alone or in combination fails to teach each and every element of Applicants' claimed invention because Wang nowhere applies a fuzzy distance transform. The Examiner disagrees because Borgefors discloses fuzzy distance transforms on borders and producing skeletons and then Wang in the first twp paragraphs of Section B. Basic Definitions discloses a distance transform based on the distance between a point of the object and the complement (or the border) of the object and a medial axis transformation (or “skeleton”) which provides motivation for combining the two references by enhancing Borgefors Fuzzy Border Distance Transform by providing distance transform basics to the further developed Fuzzy Border Distance Transform. Also in response to applicant's argument that the references fail to show certain features of applicant’s invention, it is noted that the features upon which applicant relies (i.e., a straight line is no longer considered to be the shortest distance between two points but rather may actually be convoluted meaning that the length is fuzzy) are not recited in the rejected claim(s).

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Therefore the rejections are maintained.

The Applicant alleges, "Response to the Second Rejection under 35 U.S.C. 103(a) ..." in pages 19-20, and states respectively that the combination of Borgefors, Wang and Saha 2000 is not obvious. The Applicant's arguments are persuasive and therefore the Examiner has therefore withdrawn the rejections as relied upon by Saha 2000 toward claims 6, 8-9, 12, and 14-15.

The Applicant alleges, "Response to the Third Rejection under 35 U.S.C. 103(a) ..." in pages 21-22, and states respectively that Lang's X-ray methods although used to evaluate bone disease are inadequate to suggest Applicants' invention. Firstly as discussed above, Borgefors discloses the volumetric region / 2D or higher dimensions such as 3D of an object from an image (see Borgefors, right column of page 181 at paragraph "As mentioned in the Introduction …", easily extendible to higher dimensions such as 3D which is related to volumetric regions). Secondly Lang discloses providing x-ray images of a bone from or in the subject / bone of patient and that the computational method / skeletonization is for evaluating or diagnosing bone disease in the subject / for monitoring progression of osteoporosis and therapeutic response (see Lang, paragraphs [0210], [0042], [0029]-[0031], *a skeletonization of the image data is performed to diagnose bone disease*, monitor the progression of bone disease, selecting a therapy based on the evaluation of bone disease and monitoring the progression of bone disease during or after administration of the selected therapy [bone

disease being osteoporosis or bone fracture]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Borgefors's method by using Lang's teachings by including to *Borgefors's skeletonization technique [using the fuzzy border distance transform]* the diagnosis of bone disease of a patient in order to be able to select and administer therapy to the evaluated diagnosis (Lang, paragraphs [0210], [0042], [0029]-[0031]). In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., image readings of the density of the tissue in a slices, wherein the image is computer assembled, e.g. in a CT scan or MR imaging) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Therefore the rejections are maintained.

The Applicant alleges, "Regarding the Gomberg Doctoral Dissertation …" in page 22, and states that any remaining rejection relating over the Gomberg Dissertation should be removed. The arguments are persuasive, and therefore moots any standing or further rejection of the present invention over the Gomberg Dissertation.

Therefore claims 1-5, 7, 10-11, 13, 16-28 and 31-34 are still not in condition for allowance because they are still not patentably distinguishable over the prior art references.

Drawings

8. The drawings are objected to because the new Fig. 19 requires [37 CFR 1.84(p)(5)] reference numbers for each of the four flowchart box's; also, only one section of the specification needs to be amended to incorporate such new reference numbers.

Appropriate correction is required.

Claim Objections

9. Claim 17 is objected to because of the following informalities:

Claim 17 at lines 3-4: The Applicant has miss-advertently added an extra "obtaining" to the claim language when amending the claims. "obtaining obtaining an image" should be -- obtaining an image --.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

11. Claim 1 is rejected under 35 U.S.C. 102(a) as being anticipated by Borgefors ("Fuzzy border distance transforms and their use in 2D skeletonization" – August 2002, as applied in previous Office Action).

Re Claim 1: Borgefors discloses a fuzzy distance transform-based computational method / fuzzy border distance transform for analyzing digital images (see Figs. 2 and 3) defining a volumetric region / 2D or higher dimensions such as 3D of an object from an image (see abstract, Section 2 – Fuzzy border distance transforms, Figs. 2 and 3, skeletonization of objects is performed on 2D digital images [right column of page 181 at paragraph "As mentioned in the Introduction …", easily extendible to higher dimensions such as 3D which is related to volumetric regions]) comprising: (a) obtaining an image of the targeted object (see abstract, Section 2 – Fuzzy border distance transforms, Figs. 2 and 3 show obtaining the initial targeted object and then initializing the fuzzy border distance transform and then the resulting skeletonized image produced from the computed fuzzy border distance transform); (b) finding a plurality of points in the image to generate a fuzzy subset / fuzzy border and compute a fuzzy distance transform (FDT) / fuzzy border distance transform of the fuzzy subset / fuzzy border (see abstract, Section 2 – Fuzzy border distance transforms, Figs. 2 and 3 show obtaining the initial targeted object and then initializing the fuzzy border distance transform and then the resulting skeletonized image produced from the computed fuzzy border distance transform); (c) compiling a computer processed / using algorithms plot or revised image / skeletonized image based upon the computed FDT / fuzzy border distance transform (see abstract, Section 2 – Fuzzy border distance transforms, Figs. 2

and 3 show obtaining the initial targeted object and then initializing the fuzzy border distance transform and then the resulting skeletonized image produced from the computed fuzzy border distance transform); and (d) displaying same in high resolution (see Fig. 3, left column of page 183 at paragraph "In Figure 3, left, …", scanning electron microscope image quality resulting skeletonized image produced from the computed fuzzy border distance transform).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claims 2-5, 7, 10-11, 13, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borgefors in view of Wang ("Some sequential algorithms for a generalized distance transformation based on minkowski operations" – IEEE – 1992, pages 1114-1121, as applied in previous Office Action). The teachings of Borgefors have been discussed above.

Re Claim 2: However Borgefors doesn't explicitly suggest assigning to a point in the fuzzy subset its respective fuzzy distance from a complement of a support of the fuzzy subset.

Wang discloses assigning to a point in the subset its respective distance from a complement of a support of the subset (see page 1115, paragraph "Rosenfeld [2] has

first proposed a DT based on the …" and "The medial axis transformation (or skeleton) …") [this is similar to Borgefors wherein the complement is the border and the medial axis transformation is the skeleton].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Borgefors's method using Wang's teaching by including such an assignment to Borgefors's Fuzzy Border Distance Transform in order to provide the *Distance Transform basics* to the further developed Fuzzy Border Distance Transform.

Re Claim 3: Borgefors further discloses wherein the support comprises a set of all points in the fuzzy subset / fuzzy border with a value greater than or equal to a support value (see abstract, Section 2 – Fuzzy border distance transforms, the border is determined by initialization using two thresholds and wherein values above [greater than or equal] T_h are definitely part of the object).

Re Claim 4: Borgefors further discloses wherein the FDT / fuzzy border distance transform is in digital cubic space / 3D (see abstract, Section 2 – Fuzzy border distance transforms, Figs. 2 and 3, skeletonization of objects is performed on 2D digital images [also extendible to higher dimensions such as 3D]).

Re Claim 5: Wang further discloses the step of sampling FDT [Borgefors fuzzy border distance transform] values along a medial axis of the support of the fuzzy subset

[Borgefors fuzzy border] to estimate regional target object thickness distribution (see Wang, page 1115, paragraph “The medial axis transformation (or skeleton …”, the medial axis transformation is used to estimate the regional thickness by basically getting the skeleton [Borgefors also finds this skeleton as shown in Figures 2 and 3 of Borgefors which is very similar to the applicant’s discussion of medial axis in regards to the Applicants specification paragraph 0023 and Applicant's figure 3b and 3c]).

Re Claim 7: Borgefors further discloses wherein FDT / fuzzy border distance transform is computed in digital cubic space / 3D of resolution of target object thickness or smaller (see abstract, Section 2 – Fuzzy border distance transforms, Figs. 2 and 3, skeletonization of objects is performed on 2D digital images [also extendible to higher dimensions such as 3D]).

Re Claim 10: Wang further discloses whereby FDT [Borgefors fuzzy border distance transform] values are sampled along a medial axis directly computed from the fuzzy subset [Borgefors fuzzy border] (see Wang, page 1115, paragraph “The medial axis transformation (or skeleton …”, the medial axis transformation is used to estimate the regional thickness by basically getting the skeleton [Borgefors also finds this skeleton as shown in Figures 2 and 3 of Borgefors which is very similar to the applicant’s discussion of medial axis in regards to the applicants specification paragraph 0023 and applicant's figure 3b and 3c]).

As to claims 11 and 13, the discussions are addressed with respect to claims 4 and 7.

Re Claim 16: Borgefors further discloses applying *one or more* additional steps consisting of skeletonizing / skeletonization (see abstract, Section 2 – Fuzzy border distance transforms, Figs. 2 and 3), feature extracting; analyzing morphological or shape-based object, computing regional object depth; calculating average or regional object thickness distribution; and local scaling. Wang further discloses applying one or more additional steps consisting of skeletonizing / skeleton (see Wang, page 1115, paragraph "The medial axis transformation (or skeleton …", the medial axis or skeleton [Borgefors also finds this skeleton as shown in Figures 2 and 3 of Borgefors which is very similar to the Applicant's discussion of medial axis in regards to the Applicants specification paragraph 0023 and Applicant's figure 3b and 3c]).

14. Claims 17, 22-25 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borgefors, in view of Lang et al (US 2003/0112921 A1, as applied in previous Office Action).

Re Claim 17: Borfefors discloses a fuzzy distance transform-based computational method / fuzzy border distance transform for analyzing digital images (see Figs. 2 and 3) defining at least one volumetric region / 2D or higher dimensions such as 3D in the subject / object (see abstract, Section 2 – Fuzzy border distance transforms, Figs. 2 and

3, skeletonization of objects is performed on 2D digital images [right column of page 181 at paragraph “As mentioned in the Introduction …”, easily extendible to higher dimensions such as 3D which is related to volumetric regions]), the method comprising: (a) obtaining an image of targeted region (see abstract, Section 2 – Fuzzy border distance transforms, Figs. 2 and 3 show obtaining the initial targeted object and then initializing the fuzzy border distance transform and then the resulting skeletonized image produced from the computed fuzzy border distance transform); (b) finding a plurality of points in the image to generate a fuzzy subset / fuzzy border and computing a fuzzy distance transform (FDT) / fuzzy border distance transform of the fuzzy subset / fuzzy border (see abstract, Section 2 – Fuzzy border distance transforms, Figs. 2 and 3 show obtaining the initial targeted object and then initializing the fuzzy border distance transform and then the resulting skeletonized image produced from the computed fuzzy border distance transform); (c) compiling a computer processed / using algorithms plot or revised image / skeletonized image based upon the computed FDT / fuzzy border distance transform (see abstract, Section 2 – Fuzzy border distance transforms, Figs. 2 and 3 show obtaining the initial targeted object and then initializing the fuzzy border distance transform and then the resulting skeletonized image produced from the computed fuzzy border distance transform); and (d) displaying same in high resolution (see Fig. 3, left column of page 183 at paragraph “In Figure 3, left, …”, scanning electron microscope image quality resulting skeletonized image produced from the computed fuzzy border distance transform).

However Borgefors doesn't explicitly suggest that the object is a bone from or in the subject and that the computational method is for evaluating or diagnosing bone disease in the subject.

Lang discloses providing x-ray images of a bone from or in the subject / bone of patient and that the computational method / skeletonization is for evaluating or diagnosing bone disease in the subject / for monitoring progression of osteoporosis and therapeutic response (see Lang, paragraphs [0210], [0042], [0029]-[0031], a skeletonization of the image data is performed to diagnose bone disease, monitor the progression of bone disease, selecting a therapy based on the evaluation of bone disease and monitoring the progression of bone disease during or after administration of the selected therapy [bone disease being osteoporosis or bone fracture]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Borgefors's method by using Lang's teachings by including to Borgefors's skeletonization technique [using the fuzzy border distance transform] the diagnosis of bone disease of a patient in order to be able to select and administer therapy to the evaluated diagnosis (Lang, paragraphs [0210], [0042], [0029]-[0031]).

Re Claim 22: Lang further discloses selecting a therapy based on the diagnosis or evaluation of bone disease in the subject (see Lang, paragraphs [0210], [0042], [0029]-[0031], a skeletonization of the image data is performed to diagnose bone disease, monitor the progression of bone disease, selecting a therapy based on the evaluation of

bone disease and monitoring the progression of bone disease during or after administration of the selected therapy [bone disease being osteoporosis or bone fracture]).

Re Claim 23: Lang further discloses administering said therapy to the subject (see Lang, paragraphs [0210], [0042], [0029]-[0031], a skeletonization of the image data is performed to diagnose bone disease, monitor the progression of bone disease, selecting a therapy based on the evaluation of bone disease and monitoring the progression of bone disease during or after administration of the selected therapy [bone disease being osteoporosis or bone fracture]).

Re Claim 24: Lang further discloses wherein the evaluation further comprises monitoring a progression or regression of bone disease in the subject, during or at one or more times after administering the selected therapy (see Lang, paragraphs [0210], [0042], [0029]-[0031], a skeletonization of the image data is performed to diagnose bone disease, monitor the progression of bone disease, selecting a therapy based on the evaluation of bone disease and monitoring the progression of bone disease during or after administration of the selected therapy [bone disease being osteoporosis or bone fracture]).

As to claim 25, the discussions are addressed with respect to claim 17 respectively. Further, Borgefors fuzzy border distance transform terminates is a finite

number of steps (see Borgefors, Figs. 2 and 3, a number of iterations are processed for the skeletonization, but a result is produced). Also, from the skeletonization of the image, the structural thickness of an object from the digital image can be calculated (see Lang, paragraphs [0210], [0042], [0029]-[0031], the bone density and bone structure can be evaluated using skeletonization to help in selecting the therapy).

As to claim 31, the discussions are addressed with respect to claim 25.

15. Claims 18-21, 26-28 and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borgefors, as modified by Lang, and further in view of Wang. The teachings of Borgefors as modified by Lang have been discussed above.

As to claims 18-21, the discussions are addressed with respect to claims 2-5.

As to claims 26-28, the discussions are addressed with respect to claims 2-4.

As to claims 32-34, the discussions are addressed with respect to claims 26-28.

Allowable Subject Matter

16. Claims 6, 8, 12, and 14 [claim 9 is dependent upon claim 8; claim 15 is dependent upon claim 14] are objected to as being dependent upon a rejected base

claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wehrli et al discloses a virtual bone biopsy and using a Fuzzy Distance Transform FDT [the provisional filed on 12/05/2001 *does not* have support for the fuzzy distance transform].

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Krasnic whose telephone number is (571) 270-1357. The examiner can normally be reached on Mon-Thur 8:00am-4:00pm and every other Friday 8:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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August 24, 2009